

R E M A R K S

Reconsideration of this application, as amended, is respectfully requested.

THE CLAIMS

Claim 1 has been amended to recite "a weight pattern comprising a two-dimensionally-arrayed plurality of weight coefficients" instead of "an arrangement of weight coefficients in correspondence with pixel positions in the input image," and to recite that the histogram generation means generates the weighting histogram "based on a state of two-dimensional arrangement of the plurality of weight coefficients contained in the selected weight pattern," as supported by Figs. 6A to 6F and the disclosure in the specification at, for example, page 20, line 22 to page 22, line 2.

New claim 6 recites that the weight coefficients in the weight pattern are arranged in correspondence with pixel positions in the input image, as previously recited in claim 1.

And new claim 7 recites that the characteristic amount comprises an edge component calculated at each of the pixel positions in the input image, and the histogram generation means generates the weighting histogram based on the edge component at each of the pixel positions in the input image and the weight coefficient corresponding to each of the pixel positions, as

supported by the disclosure in the specification at, for example, page 20, line 10 to page 22, line 2 and page 24, lines 5-9.

No new matter has been added, and it is respectfully requested that the amendments to the claims be approved and entered.

THE PRIOR ART REJECTION

Claims 1, 2 and 5 were rejected under 35 USC 103 as being obvious in view of the combination of USP 5,715,377 ("Fukushima et al") and US 2002/0025079 ("Kuwata et al"), and claim 3 was rejected under 35 USC 103 as being obvious in view of the combination of Fukushima et al, Kuwata et al, US 2004/0032524 ("Silverbrook") and USP 4,969,045 ("Haruki et al"). These rejections, however, are respectfully traversed with respect to the claims as amended hereinabove.

On page 5 of the Office Action, the Examiner acknowledges that Fukushima et al does not disclose: selection means for selecting an arrangement of weight coefficients in correspondence with pixel positions in the input image; or histogram generation means for generating a weighting histogram related to the characteristic amount based on the arrangement of the weight coefficients in correspondence with the pixel positions in the input image; or a gradation conversion curve calculated based on

the histogram. For this reason, the Examiner has cited again Kuwata et al to supply the missing teachings of Fukushima et al.

In the Amendment filed on April 2, 2008, it was explained that Kuwata et al actually discloses selecting a single coefficient k . The single coefficient is 0.8 if the image is a portrait image or 0.2 if the image is a scenery image. Alternatively, the single coefficient may be calculated automatically. See steps SD192, SD194 and SD196 in Fig. 46 of Kuwata et al.

In response, the Examiner points to equation (68) of Kuwata et al. In this equation, the weighting coefficient k is used in two expressions, k and $1-k$. The edge sampling summation result $Dist_edg$ is multiplied by k , the uniform sampling summation result $Dist_ave$ is multiplied by $1-k$, and the results are added to obtain $Dist_Sum$, which is a histogram of luminance distribution. See Figs. 46-48 of Kuwata et al.

Therefore, the Examiner contends that the weighting coefficient k of Kuwata et al should be interpreted as two weighting coefficients, k and $1-k$.

Even if the Examiner's interpretation were reasonable, expressions k and $1-k$ in formula (68) of Kuwata et al are not a weight pattern comprising a two-dimensionally-arrayed plurality of weight coefficients. See Figs. 6A through 6F of the present application for examples of weight patterns comprising a two-

dimensionally-arrayed plurality of weight coefficients. By contrast, even according to the Examiner's interpretation, Kuwata et al only discloses the expressions k and $1-k$ (e.g., 0.8 and 0.2 if the image is a portrait). These two expressions are not a two-dimensionally-arrayed plurality of weight coefficients.

For example, with the structure recited in amended independent claim 1, appropriate gradation correction is enabled for different two-dimensionally-arrayed portions of the input image. For example, each of the plurality of two-dimensionally-arrayed weight coefficients can be arranged in correspondence with a pixel position in the input image (see claim 6), and appropriate gradation correction is enabled for each pixel position of the input image by increasing or decreasing the weight coefficient of the pixel position when generating a histogram.

It is respectfully submitted that Kuwata et al does not disclose, teach or suggest these features or effects of the present invention as recited in amended independent claim 1. Accordingly, it is respectfully submitted that even if Kuwata et al were combinable with Fukushima et al in the manner suggested by the Examiner, the structure of the present invention as recited in amended independent claim 1 still would not be achieved or rendered obvious.

With respect to dependent claim 7, Dist_edge in formula (68) of Kuwata et al indicates a histogram obtained by edge (an edge histogram), and Dist_ave indicates a histogram obtained by uniform sampling (a luminance histogram). See paragraphs [0343]-[0344] and Fig. 47 of Kuwata et al. The single histogram of luminance distribution Dist_Sum is obtained by weighting and combining Dist_edge and Dist_ave as shown in equation (68).

By contrast, as recited in claim 7, the weight coefficients are used when generating the edge histogram itself, not when adding an edge histogram and a luminance histogram as in Kuwata et al.

Silverbrook and Haruki et al, moreover, have merely been cited with respect to dependent claim 3.

Accordingly, it is respectfully submitted that amended independent claim 1 and claims 2, 3 and 5-7 depending therefrom clearly patentably distinguish over the Fukushima et al, Kuwata et al, Silverbrook, and Haruki et al, taken in any combination under 35 USC 103.

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In view of the foregoing, entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

Application Serial No. 10/807,479
Response to Office Action

Customer No. 01933

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned for prompt action.

Respectfully submitted,

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